

Bagdyk'yants, G. O.

AUTHOR: Bagdyk'yants, G. O.

53-4-10/11

TITLE: Electron Microscopy in Japan (Elektronnaya mikroskopiya v Yaponii).

PERIODICAL: Uspekhi Fizicheskikh Nauk, 1957, Vol. 63, Nr 4, pp. 827-845 (USSR).

ABSTRACT: The first regional conference on the electron microscopy of the countries of Japan and Oceania was held at Tokyo from the 23 to the 27 October 1957. It was organized by the Japanese Society for Electron Microscopy with the support of the scientific council of Japan and the ministry of education. Lectures were held on this conference, among others, by 6 delegates from the USSR, and Red China sent 5 delegates one of whom delivered a lecture. The Soviet delegation consisted of V. G. Nyrykov, V. V. Il'in, A. Ye. Kriss, V. M. Luk'yanchikov, G. F. Fedyuk, G. O. Bagdyk'yants. The sessions of the conference were held according to the following program: First day: welcoming addresses, lectures giving surveys; second day: electron optics, devices and the technique of preparing; third day: biological applications (bacteria, virus, and histology); fourth day: industrial application (physical, metallurgical and chemical investigations). One day was completely taken up by visiting three firms producing electron microscopes as well as the laboratory for electron microscopy of Tokyo University. Further, an exhibition of Japanese devices and of elec-

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tron microscopic pictures taken by Japanese research scientists was organized for the benefit of the delegates of the conference. Lectures and discussions will be published in the volume "The Work performed by the First Regional Conference on Electron Microscopy in the Countries of Asia and Oceania in Tokyo", 1956. The author first gives a short report on the present stage of electron microscopy in Japan. With her 300 electron microscopes Japan ranges third in the world behind the USSR and the USA. The society for electron microscopy has about 700 scientists as members. At present 4 Japanese firms are occupied with the production and development of electron microscopes. Research work and experimentally-constructive work on electron microscopy and on the diffraction of electrons are apparently being carried out at least 30 institutes (among them 17 university institutes). Cooperation between several institutes is by no means rare. The next chapter deals with contents of lectures. The 6 lectures delivered by Soviet delegates dealt with the following subjects. Professor A. Ye. Kriss delivered three lectures on virus study. V. M. Luk'yanovich (AN USSR) spoke about the application of electron microscopical investigations to the study of the structure of porous bodies. The head of the Soviet delegation V. G. Nyrykov in a survey spoke about the electron microscopes and electronographs. The fur-

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ther chapters of this paper deal with the following. The most important works published in the periodical "Electron Microscopy", a short characterization of some firms and organizations occupied with electron microscopy, the technical properties of electron microscopes at present produced in Japan, the exhibition of devices of Japanese production.

There are 9 figures, 2 tables, and 77 references.

AVAILABLE: Library of Congress.

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pagoda yants - G.A.

APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000103010015-0"

AUTHORS: Bagdyk'yants, G. O., Shishatskiy, A. V. SOV/48-23-4-11/21

TITLE: A Roentgen Shadow Microscope (Rentgenovskiy tenevoy mikroskop)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959,
Vol 23, Nr 4, pp 481 - 484 (USSR)

ABSTRACT: First, the Roentgen microscope is considered along with photo-optical and electronic microscopes and the range of applicability is mentioned. In principle, in this microscope the shadow projection is depicted by a punctiform Roentgen source. This consists either of a probe on which an electron beam is focused or of an anticathode (diameter $\sim 0.5 \mu$) on which the electron beam hits. Figure 1 and 2 show the model designed by the authors in cooperation with the designers N. G. Zandin and S. P. Rozov. Because of the low intensity, the films must be exposed up to 20 minutes at an accelerating voltage of 10 kv. With 30 kv exposure lasts only 3 minutes. A special model of anode, cathode and stop yields an electron beam of high intensity and small aperture. With an accelerating voltage of 9 kv and an emission current of $50 \mu\text{A}$ an exposure time of 30-40 sec is necessary for highly sensitive films. A description follows of the construction of accelerator and electromagnetic lenses. The image screen is observed with a 37fold photo-optical magnification. The microscope features two cameras: one for single pictures

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(20 x 20 mm) and one for series pictures (maximum 36 pieces). The resolving power of the electron beam goes as far as 300 Å, that in the Roentgen film as far as 0.5 Å. Cosslett and Nixon (Ref 8) attained 0.14 Å by an instrument of this type. A table specifies the resolving powers and exposure times of one American, one Japanese, two English and one Russian instrument. There are 2 figures, 1 table, and 12 references, 2 of which are Soviet.

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9(6)

AUTHORS: Bagdyk'yants, G. O., Shishatskiy, A. V. SOV/48-23-5-1/31TITLE: Peculiarities of the Picture in X-ray Shadow Microscopes
(Osobennosti isobrazheniya v rentgenovskom tenevom mikroskope)PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959,
Vol 23, Nr 5, pp 538 - 540 (USSR)ABSTRACT: By way of an introduction it is pointed out that among the methods suggested hitherto for the preparation of X-ray microscopic pictures, the method of shadow projection is applied in practice. The present paper deals with some special results obtained by X-ray microscopic photography with the X-ray shadow microscope GOI. It is shown that in the case of a resolving power of 0.5μ and a 10fold magnification of the negative, a 40fold primary magnification is required to render the picture observable with the naked eye. Theoretically there is no upper limit for magnifications made possible by instruments of this type; the times of exposure, however, become exceedingly long with very strong magnifications. The quality of the pictures depends on the properties of the film and on the photographing technique, and in further works a

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Microscopes

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high-sensitivity fine-grain aerial film is employed. In discussing the contrast and intensity of the X-ray pictures it is pointed out that a greater wavelength is required for a good contrast. The authors used "white X-ray light", and an accelerating voltage of 7 - 10 kv was applied in the case of biological objects. Specific amperages of up to 5500 a/cm² are given for the electron probe and the anticathode; reference is also made to the lateral anticathode cooling. In selecting the anticathode material the following items were taken into account: 1) effective X-ray efficiency; 2) thermal properties; 3) wavelength of the maximum emission of the material. A discussion follows concerning the mechanical demands made on the cathode, and in the final part, the range of applicability of microscopes of this type is dealt with. For comparative purposes, an American and a Japanese microscope are mentioned, and two pictures taken with the GOI instrument are shown. There are 2 figures and 8 references, 3 of which are Soviet.

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AUTHORS: Bagdyk'yants, G. O., Alekseyev, A. G. SOV/18-23-6-26/28

TITLE: The Measurement of the Intensity and the Elimination of the Background of Dispersed Electrons in Electronographical Investigations (Izmereniye intensivnosti i ustraneniye fona rasseyannykh elektronov pri elektronograficheskikh issledovaniyakh)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 6, pp 773-776 (USSR)

ABSTRACT: The quality of the electronic image depends on the electron-optical properties of the imaging system and onelectron dispersion. The latter influences the resolving power. In the introduction measurement of the distribution of dispersed electrons and their energy after interaction with the electrostatic potential of the particles is dealt with and it is shown that recording by means of a photographic emulsion cannot be carried out in practice. Other investigations, in which measurements were carried out by means of Geiger-Müller counters and semiconductors, are mentioned (Refs 1, 2, 3). The method of direct measurement by means of a secondary electron amplifier worked out by the authors, the amplification

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The Measurement of the Intensity and the Elimination SOV/48-23-6-26/28
of the Background of Dispersed Electrons in Electronographical Investigations

coefficient of which is about 10^9 , is then discussed and supplemented by two drawings (Fig 1). Figure 2 shows under a) the electron dispersion intensity of a polycrystalline sample (NaCl) recorded by means of this device, and under b) the same curve after filtration of the non-coherent dispersed electrons. In conclusion, the fluctuation of the curve, caused by unstable emission- and ionic current and by an insufficiently high vacuum is investigated, and in a diagram intensity fluctuation with and without stabilization of the electronograph is shown. The authors thank A. A. Lebedev for his interest and discussions. There are 3 figures and 6 references, 2 of which are Soviet.

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24 (7)

AUTHOR:

Bagdyk'yants, G. O.

SOV/53-68-1-16/17

TITLE:

At the 4th International Congress on Electron Spectroscopy
(Chetvertyy mezhdunarodnyy kongress po elektronnoy mikroskopii)

PERIODICAL:

Uspekhi fizicheskikh nauk, 1959, Vol 68, Nr 1, pp 185 - 195
(USSR)

ABSTRACT:

The author gives a detailed report on the afore-mentioned Congress which took place in West Berlin from September 10 to 17, 1958. The Congress was attended by delegates from 30 countries (among them the USSR). In the introduction the author refers to 12 lectures delivered by delegates from the USSR, the GDR, and Switzerland. As to the lectures held by the Soviet delegation, the author mentions in a foot-note that a lecture on a high voltage microscope submitted by N. M. Popov could not be held as the author was not present. Another foot-note reads that G. O. Bagdyk'yants and A. G. Alekseyev devised a method similar to that of Horstmann et al (West Germany) which serves the purpose of measuring the intensity of scattered electrons in electronographic investigations. In conclusion, the author reports on the instrument exhibition. A table contains several data of the exhibited microscopes. There is 1 table, 3 Soviet references.

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PAGE 1 RU: ENGLISH SJ/5955
Vsesoyuznoye Sovetovatel'nyye i Prakticheskoye Protsessy v Sverdlovskoye Kremlyanskoye, 1957.

Steklooborazovaniye i stekloobrabotka; trudy Tret'yeogo Vsesoyuznogo Soveshchaniya Lenintezhrid, 16-20 noyabrya 1959 (Vsesoyuznoye Trudovoye Finansirovaniye i Finansirovaniye na Tsentral'noy Union Conference on the Vitreous State), Held in Leningrad October 16-20, 1959) Moscow, Izdat. Akad. Nauk SSSR, 1960. 524 p. Errata slip inserted. 3,200 copies printed.
(Series: Its: Trudy)

Sponsoring Agencies: Institut Khimii Silikatov Akademii Nauk SSSR. Vsesoyuznoye Khimicheskoye Obshchestvo imeni D.I. Mendeleeva and Gosudarstvennyy Orkelets Lenin Opticheskoy Instituta imeni S.I. Vavilova.

Editorial Board: A.I. Avgustinik, V.P. Barashkovskiy, M.A. Besharovskiy, O.K. Bokvinkin, V.V. Ferg, A.G. Vinogradov, K.S. Yerushal'mskiy, A.A. Lebedev, M.M. Litvakov, V.S. Molchanov, R.D. Myasnikov, Ye. Popov-Kochina, Chairman, R.A. Toropov, V.N. Florintsev, A.E. Tabinik, Ed. of Publishing House: I.V. Sururov; Tech. Ed.: V.T. Bocharov.

PURPOSE: This book is intended for researchers in the science and technology of glasses.

CONFERENCE: The book contains the reports and discussions of the Third All-Union Conference on the Vitreous State, held in Leningrad on November 16-19, 1959. They deal with the methods and results of studying the structure of glasses, the relation between the structure and properties of glasses, the nature of the chemical bond and glass structure, and the crystallography of glasses. Fund-silica, mechanics of vibration, optical properties and glass structure, and the electrical properties of glasses are also discussed. A number of the reports deal with the dependence of glass properties on composition, the tinting of glasses and radiation effects, and mechanical, thermal, and chemical properties of glasses. Other papers treat glass semiconductors and solid boron-lithium glasses. The Conference was attended by more than 500 delegates from Soviet and East German scientific organizations. Among the participants in the discussions were K.V. Solntsev, Ye. V. Kuklinitskiy, Yu. A. Gaster, V.P. Pyatnitskiy, Yu. Yo. Gor'kin, O.P. Moshel'ev-Tetrogov, G.I. Mikhaylov, S.M. Petrov, A.N. Litarev, D.I. Gotlib, O.P. Moshel'ev-Tetrogov, A.Ya. Kurnikov, E.V. Detyarava, G.V. Lertin, A.V. Shatilov, M.R. Pleschchinskiy, A.Ya. Kurnikov, E.V. Detyarava, E.M. Koller, Ya.A. Bykovskiy, V.P. Portnov, R.D. Shevelev, Z.G. Plisner, P.Ya. Radko, and O.S. Molchadova. Funktion, V.P. Portnov, R.D. Shevelev, Z.G. Plisner, and I.L. Kitoropodanov, the final editor of the Conference, was addressed by Professor I.I. Kitoropodanov, Honored Scientist and Engineer, Doctor of Technical Sciences. The following Institutes were cited for their contribution to the development of glass science and technology: Gosudarstvennyy Opticheskyy Institut (State Optical Institute), Institute khimii silikatov SSSR (Institute of Silicate Chemistry), AS USSR, Priborostroitel'nyy Inzhenernyy Institut AS USSR (Physico-Chemical Institute AS USSR), Institut Chisl. Aif. ESR, Institut AN SSSR (Institute of Physics, Academy of Sciences of the Ukrainian SSR), Institute of Inorganic Chemistry of Physical Chemistry of Silicates of the Institute of Chemistry 1, neorganicheskoy khimii i fiziki chelyuskov (Institute of General and Inorganic Chemistry), Akademy of Sciences, Belorussiya SSR, Minsk. Institut Vysokomolekul'stvennykh Soedineniy AS SSSR (Institute of High Molecular Compounds, AS USSR), Dokumentatsionnyy Institut Akad. Nauk (State Institute for Glass), Gosudarstvennyy Institut tekhnologii i tekhnicheskikh sredstv (State Institute for Glass Fibers), Gosudarstvennyy Institut elektrotekhnicheskikh sredstv (State Institute for Electrical and Glass), Substraty fiziko-tekhnicheskikh sredstv, Tver. (Gubkin Polytechnic Institute, Tver), Leningradskiy gosudarstvennyy universitet (Leningrad State University), Moshel'ev-Khainovskiy Politekhnicheskyy Institut (Leningrad State University of Chemical Technology), Leningradskiy tekhnologicheskyy institut (Moscow Institute of Chemical Technology), Institut imeni L. V. Lenovoye, Leningradskiy Politekhnicheskyy Institut Minsk (Fedorovskiy Polytechnic Institute, Minsk), Moshel'ev-Khainovskiy Politekhnicheskyy Institut (Moshel'ev-Khainovskiy Politekhnicheskyy Institut) and Sverdlovskiy Politekhnicheskyy Institut (Sverdlovsk Polytechnic Institute). The Conference was sponsored by the Institute of Silicate Chemistry of the USSR (Khilyan strel'), the Vsesoyuznoye Khimicheskoye obshchestvo im. D.I. Mendeleeva (Leningrad Chemical Society), Leningradskiy obshchestvo im. D.I. Mendeleeva (Leningrad Chemical Society), Leningradskiy obshchestvo im. S.I. Vavilova, and the Gosudarstvennyy Orden Leningraza "Optical Institute of Leningrad".
S.I. Vavilova (State Order of Leningrad). The Conference included recommendations to organize a Center for the purpose of coordinating the research on glass, to publish a new periodical under the title "Prilozheniya khimii strel' k Vsesoyuznoy konferentsii po vitreous state" (Proceedings of the International Conference on Glasses). The Conference thanks A.A. Lebedev, Academician Professor, and Chairman of the Organization Committee; Ye. A. Tret'yakov-Mil'skiy, Doctor of Physics and Mathematics, Member of the Organizational Committee; G.I. Moshel'ev, Doctor of Chemical Sciences, Member of the Organizational Committee; G.V. Lertin, Doctor of Chemical Sciences, Member of the Organizational Committee; G.M. Jurtev, Doctor of Chemical Sciences, Member of the Organizational Committee; G.I. Dobrochin, S.G. Dubrova, V.A. Ioffe, and H.V. Volkovskaya, Ph. D., Doctor of Chemical Sciences, Member of the Organizational Committee.

B.T. Fol'dszyet. Reference accompanying individual reports.

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| Florintseva, V.A. Infrared Reflection Spectra of Soda-Silicate Glasses and Their Relation to Structure | 177 |
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| Pronsky, V.A., V.I. Grinenko, and L.M. Pravil'nikova. Electrical Conductivity of Glasses in High Strength Electric Fields and Problems of Glass Structure | 251 |
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84689

~~94160 (3201, 1105, 1137)~~
243000 1130, 1138, 1051S/051/60/009/005/010/019
E201/E191AUTHORS: Krylova, T.N., and Bagdyk'yants, G.O.TITLE: A Study of the Optical Properties and Structure of
Titanium Dioxide Layers

PERIODICAL: Optika i spektroskopiya, 1960, Vol.9, No.5, pp 644-647

TEXT: Thin layers of titanium dioxide are widely used in optics and elsewhere. Titanium dioxide occurs naturally in two crystal forms: anatase and rutile. Layers of titanium dioxide produced by hydrolysis of titanium tetrachloride or by other chemical means are usually amorphous. The present paper describes a study of the optical properties and structure of amorphous titanium dioxide layers prepared from $Ti(OC_2H_5)_4$ solutions. The authors measured the reflection coefficient (R) as a function of wavelength and layer thickness ($0.15-1 \mu$) in the visible region. Curves 1 and 2 in Fig. 1 show the spectra of layers with optical thicknesses of 4300 and 3500 Å. Layers which were denser in the optical sense could be prepared by successive deposition (curve 3 shows the reflection spectrum of such a composite layer). Fig. 2 gives the dispersion curves (refractive index against wavelength) X

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A Study of the Optical Properties and Structure of Titanium
Dioxide Layers

for layers produced from dilute (curves 1 and 2) and concentrated (curve 3) solutions. The refractive indices plotted in Fig. 2 were calculated from the reflection coefficient R. Fig. 2 gives also de Vore's (Ref. 1) and Hass's (Ref. 6) results for monocrystals of rutile and anatase (curves 4 and 5 respectively). Curve 6 represents $TiCl_4$ layers dried at 300 °C. The temperature dependence (100-900 °C) of the refractive index in the 500-550 μ region (Fig. 3) and the temperature dependence of the electron-diffraction patterns (Fig. 4 and a table on page 64?) show that the layers begin to crystallize as anatase at 300-350 °C. There are 4 figures, 1 table and 8 references: 5 Soviet, 2 English and 1 French.

SUBMITTED: February 27, 1960

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28033
S/081/61/000/015/094/139
B104/B110

AUTHORS: Bagdyk'yants, G. O., Alekseyev, A. G.

TITLE: Electron diffraction study of vitreous silicon dioxide
and of lead-silicate glasses

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 15, 1961, 367,
abstract 15K277 (Sb. "Stekloobrazn. sostoyaniye". M.-L.,
AN SSSR, 1960, 226-230. Diskus., 238-242)

TEXT: For the purpose of obtaining sufficiently exact curves of electron scattering by glass, the experimental technique has been improved. Powder preparations were made in a noble-gas atmosphere, some of them as very thin films. Vitreous silicon dioxide required was prepared from fine-disperse powder of fused silicon dioxide. The curve for the intensity of electron scattering from molecules in fused silicon oxide agreed with the analogous intensity curve of X-rays. Sufficiently good agreement was also found between experimental and theoretical curves obtained for a disordered lattice and for the crystallites of the elementary cells. Lead-silicate

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glasses were examined in five compositions with 20, 33, 40, 50, and 60% of PbO. The atomic arrangement in the glasses concerned is discussed on the basis of the results obtained. [Abstracter's note: Complete translation.]

X

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BAGDYK'YANTS, G.O.; KRUPYSHEVA, L.S.

Electron microscope studies of cellulose ester fibers in
ultrathin sections. Zav.lab. 28 no.11:1351 '62. (MIRA 15:11)
(Cellulose esters) (Electron microscopy)

BAGDZHIISKI, Kh.

"Cooperators of Kriva Bara Take Good Care of Their Cattle During Winter" p. 5
(KOOPERATIVNO ZEMEDELIE, Vol. 9, No. 9, 1954, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4
No. 5, May 1955, Uncl.

vičiaesči

BAGDZIUS, B., otv. red.[deceased]; CUKERZIS, J., red.; LAPINSKAITE, J.,
red.; MANIUKAS, J., red.; KAMINSKIENE, L., red.

[Hydrobiological studies of Dukstas area lakes] Duksto ezeru
hidrobiologiniai tyrimai. Gidrobiologicheskie issledovaniia
Dukshanskikh ozer. Vilnius, Leidykla "Mintis," 1964. 146 p.
[In Lithuanian and Russian] (MIRA 18:2)

1. Lietuvos TSR Mokslu Akademija, Vilna. Zoologijos ir para-
zitologijos institutas.

BAGEL', G.Ye.

Changes in rheograms under the action of ultrasound on the
peripheral pain syndrome. Dokl, AN BSSR 8 no.12:821-823 D '64.
(MIRA 18:4)

BAGEL', G.Ye.; VIL'NER, B.Ya.

Mechanism of the ultrasonic effect in the treatment of pain.
Dokl. AN BSSR 9 no. 9:633-636 S '65. (MIRA 18:11)

1. Belorusskiy gosudarstvennyy institut usovershenstvovaniya
vrachey i Institut fiziologii AN BSSR. Submitted April 9, 1965.

BAGERMAN, A.; KHOROLETS, P.

A heroic and industrious city as a guard of peace and friendship.
Mor. folio 25 no.5;13-14 My '65. (MIRA 18x5)

L 44436-66 EWT(1)/EWP(f)/T-2 WW

ACC NR: AR6028065 SOURCE CODE: UR/0285/66/000/005/0020/0020

AUTHOR: Bagerman, A. Z.

45

B

ORG: none

23

TITLE: Determining the power of a gas-turbine plant under partial loads for systems with net power takeoff from the turbine driving the compressor 23

SOURCE: Ref. zh. Turbostroyeniye, Abs. 5. 49. 96

REF SOURCE: Tr. Leningr. korablestroit. in-ta, vyp. 47, 1965, 13-17

TOPIC TAGS: gas turbine, gas turbine plant, gas turbine performance

ABSTRACT: A method of calculating the performance of a two-shaft gas-turbine plant under reduced loads, with the effective power tapped from the high-pressure shaft, is presented. [KP]

SUB CODE: 21/

Card 1/1 2

UDC: 621. 438

BAGEVA M. I.

Sluchai dermatitisa pri primenenii paraaminosalitsilovoi kisloty. [Case of dermatitis during application of para-amino-salicylic acid] Sovet. med., No. 6 June 51 p. 26-7.

1. Candidate Medical Sciences. 2. Moscow.
CML Vol. 20, No. 10 Oct 1951

Bageyev, S.N.

APPROVED FOR RELEASE 06/06/2000 CIA-RDP86-00513R000103010015-0"

Abs Jour: Ref Zhur - Biologiya, No. 1, 1958, 1393

Author : Bageyev, S.N.

Title : Methods of Artificial Reforestation of Clearings

Orig Pub: Lesn. kh-vo, 1957, No. 6, 17-18

Abstract: No abstract.

AGAPKIN, I.N., kand.med.nauk, BAGEYEVA, M.I., kand.med.nauk (Moskva)

Current status of treatment and prevention of cutaneous tuberculosis.
Sov.med. 22 no.9:53-64 S'58 (MIRA 11:11)

(TUBERCULOSIS, CUTANEOUS,

prev. & ther., current status, review (Rus))

PETRESCU, Anastasie (Craiova); DINULESCU, C., prof. (Buzau); ZAMFIRESCU, Tudor; VASILIU, Florian (Bacau); LEONTE, A. (Bucuresti); OPREA, Miron (Ploiesti); POPESCU, Gh.; MANESCU, I., prof. (Rimnicu Vilcea); BAGHINA, V., prof (Breaza); MASGRAS, V. (Bucuresti)

Solved problems. Gaz mat B 14 no.6:343-356 Je '63.

BORHEGYI, Leeszlo, dr.; KADAR, Pal, dr.; BAGHY, Klara, dr.

Recent clinical data on Ehlers-Danlos syndrome (cutis laxa hyperelastica). Orv.hetil. 102 no.4:171-173 22 Ja'61.

1. A Magyar Nephadsereg Engessegugyi Szolgalata.
(EHLELS DANLOS SYNDROME case reports)

RUSU, E.; NASTASESCU, C., elev (Pucioasa); PIRSAN, L.; MIRZAN, D.,
prof. (R. Vilcea); BAGHINA, V., prof. (Breaza); TUDOR, C.N.,
student (Bucuresti); SCHWARTZ, Lajos (Oradea); LUDMANN, Tamas
(Galati); PIKO, Janos (Oradea)

Solved problems. Gas mat B 14 no.10:607-617 0 '63.

BAGHINA, V., prof. (Breaza); BAZACOV, Gh.; IONESCU-TIU, C.; DEMENY, Zoltan
(Alud); CASANDROIU, Tudor (Bucuresti); ALBESCU, Ion (Fagaras)

Solved problems in mathematics. Gaz mat B 15 no.4:158-166 Ap '64.

MIRON, Radu, conf. univ.; NEGREI, Veronica; MANOLIU, Lucia; POLIZU, Lucia;
VISA, Eugen; HAIVAS, M.; GLIGOR, I.; FUCHS, I.; ZOICAN, Voicu;
BAGHINA, V., prof.; HADIRCA-BREAZA, I.; IVANESCU-TIRGOVISTE, C.;
NEGREA, M.; SPIRIDON, I.; SZABO-PLOIESTI, T.; GRIGORE-PLOIESTI, I.,
prof; BAZACOV, Gh., prof.; PAUNESCU, Al.; MORARU, I.; SAHAGIA, C.;
UDREA, V., prof. (Galati); NIMITAN, I. (Suceava)

Observations on the Analytic Geometry Manual for the 11th grade.
Gaz mat fiz 15 no.6:298-321 Je '63.

1. Societatea de Stiinte Matematice si Fizice, Filiala Iasi (for
Miron). 2. Societatea de Stiinte Matematice si Fizice, Filiala
Graiova (for Negrei, Manoliu, Polizu). 3. Societatea de Stiinte
Matematice si Fizice, Filiala Timisoara (for Visa, Haivas, Gligor,
Fuchs). 4. Societatea de Stiinte Matematice si Fizice, Subfiliala
Petroseni (for Zoican). 5. Societatea de Stiinte Matematice si
Fizice, Filiala Ploiesti (for Baghina, Hadirca-Breaza, Ivanescu-
Tirgoviste, Negrea, Spiridon, Azabo-Ploiesti, Grigore-Ploiesti).
6. Societatea de Stiinte Matematice si Fizice, Subfiliala Tg.
Severin (for Bazacov, Paunescu, Moraru, Sahagia).

BORHEGYI, Laszlo, dr.; BAGHY, Klara, dr.

Acute renal tubular insufficiency due to drug allergy. Orv. hetil. 102
no.12:547-550 19 Mr '61.

1. Magyar Nephadsereg Egeszsegugyi Szolgalata.

(ACUTE RENAL FAILURE etiol) (PENICILLIN toxicol)
(SULFONAMINDES toxicol)

BAGI, Mihaly

Closing address. Elelm ipar 14 no.8/9:287 Ag-S '60.

1. A Gepipari Tudomanyos Egyesulet Altalanos Gepgyartasi
Szakosztalya elnöke.

BAGI, Mihaly; DERGACS, Ferenc; GYONOS, Karoly; KAHLESZ, Bela; SURANY, Pal

The state and long-range development of the food-industry
machine production. Elelm ipar 17 no.2:56-66 F '63.

1. Moho- es Gepipari Miniszterium Alt. Gepipari Igazgatosag
(~~for~~ Bagi). 2. Orszagos Tervhivatal (for Dergacs). 3. Konzerv-
~~es~~ Parikaipari Igazgatosag (for Gynos). 4. Elelmezesipari
Tervezo Intezet (for Kahlesz). 5. Elelmezesipari Szolgaltato
Troszt (for Surany).

MESZES, Gabriella (Budapest, VIII., Muzeum korut 4/a); KARPATI, Arpad;
BAGI, Gyorgy (Budapest, VIII., Muzeum korut 4/a)

Effect of ammonium sulphate fertilizers on the photosynthesis
and fish yield of the phytoplankton in the Godollo fishponds.
Botan kozl 51 no.2/3:135-141 Ag '64.

1. Research Institute of Small Animal Breeding, Godollo
(for Karpati).

"APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000103010015-0

BAGIDIN, K.

"Three Winters in the Arctic Ice," Moscow, 1950.

APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000103010015-0"

REF ID: A6210

AUTHOR: Mavrodin, V.V.

12-1-16/26

TITLE: Against the Falsification of the History of Geographical Exploration (Protiv fal'sifikatsii istorii geograficheskikh issledovaniy)

PERIODICAL: Izvestiya Vsesoyuznogo Geograficheskikh Obshchestva, 1958,
pp. 81 - 86 (USSR)

ABSTRACT: This is a review of a book on arctic exploration, by K.S. Bagidin, a Hero of the Soviet Union and well known navigator, "The Road to Grumant" (Put' na Grumant) published by the TsK VLKMS " Molodaya Gvardiya" publishing house in 1953. The critic reproaches Bagidin for utilizing falsified reference material and not only of giving wrong historical picture but of influencing other authors. The critic considers the role of the book to be negative: it cannot be approved by Soviet scientists.

There is one Russian reference.

*) Ancient Russian name of the Spitsbergen Archipelago

AVAILABLE: Library of Congress

Card 1/1

BATIEŃSKI J.

3

4/24

Batieński J. The Application of Mercury-Arc Rectifiers to the
Raising of A.C. Frequency.

Zapewniamy Państwu 2 oryginalne kopie, jedno do eksportu,
na restitucję i drugie do użycia w kraju, po opłatach.

Warszawa, 19 kwietnia 1957 r. (J. Batieński)

A description of the frequency changer with mercury-arc rectifiers making it possible to raise the frequency of A.C. from 50 c/s to 300-1000 c/s. This paper includes: calculation of the parallel inductor, an essential part of a frequency changer; descriptions of mercury-arc rectifier and mercury arc.

BAGIENSKI, S.

"Miczurinowcy: A. Wojciechowski, R. Urban, Wl. Turek, B. Zwonkowski i
miczurinowcy z Biegonic. (Wyd.l.) Warszawa, Panstwowe Wydawn. Rolnicze
i Lesne, 1955. 104 p. (Michurin's followers: A. Wojciechowski, R. Urban,
W. Turek, B. Zwonkowski, and Michurin's followers from Biegonice. 1st ed.)."

DA

Not in DLC

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

BAGIENSKI, W.

What Kind of tourist homes would we like? p. 10. TURYSTA.
(Polskie Towarzystwo Turystyczno-Krajoznawcze) Warszawa.
No. 5, May 1955.

SOURCE: East European Accessions List, (EEAL), Library of
Congress, Vol. 4, no. 12, December 1955

BAGIL'DINSKIY, B.K.

BAGIL'DINSKIY, B.K.: "Investigation of the system of dividing V.Ya. Struve's vertical arc at Pulkovo". Leningrad, 1955. Main Astronomical Observatory, Acad Sci USSR. (Dissertations for the Degree of Candidate of Physicomathematical Sciences).

SO: Knizhnaya letopis' No 45, 5 November 1955. Moscow.

BAGIL'DINSKIY, B.K.

Investigating the graduation system of the Pulkovo vertical
circle. Izv. GAO 22 no. 1:49-82 '60. (MIRA 13:12)
(Transit circle)

S/030/61/000/003/009/013
B105/B215

AUTHOR: Bagil'dinskiy, B.K., Candidate of Physics and Mathematics

TITLE: Problems of astrometry

PERIODICAL: Vestnik Akademii nauk SSSR, no. 3, 1961, 110 - 111

TEXT: At the 15th Astrometric Conference, December 13, to 17, 1960, a summary was given of research results on the most important sections of astrometry for the time between May 1958 and December 1959. The opening speech was delivered by A.A. Mikhaylov, director of the Pulkovskaya Observatory (Pulkovo Observatory). The annual report was given by M.S. Zverev, Chairman of the Presidium of the Astrometricheskaya komissiya (Astrometric Commission). Ye.P. Fedorov, Director of the Glavnaya astronomicheskaya observatoriya Akademii nauk USSR (Astronomical Central Observatory of the Academy of Sciences UkrSSR) reported on the Congress of the International Geodetic and Geographical Association and the International Symposium on Geographical Latitudes in Helsinki. The following reports are mentioned: D.K. Kulikov on systematic divergences between the theory

Card 1/3

Problems of astrometry ...

S/030/61/000/003/009/013
B105/B215

and observation of the motion of large planets. The systematic observation of the sun and large planets at USSR observatories was deemed necessary so that an exact theory on the motion of planets can be obtained after 5 - 10 years; A.A. Nemiro reported on the precise measurement of the parameters of the earth's orbit and the zeros of absolute star catalogs; A.I. Konstantinov: on the work of USSR time service during the International Geophysical Cooperation; N.N. Pavlov: on irregularities in the earth's rotation on the basis of data obtained by the time service. Some reports dealt with new astrometric apparatus, the improvement of old ones, and the mechanization of astrometric work. In the Central Observatory of the Academy of Sciences USSR, a photographic vertical circle designed by M.S. Zverev and a horizontal "passage" instrument with goniometer designed by A.A. Nemiro are being built. An astrometric meniscus astrophotograph (D.D. Maksutov) is being developed for this observatory. The organization of expert groups in the main observatories of the USSR and UkrSSR and the Vychislitel'nyy tsentr Akademii nauk USSR (Calculation Center of the Academy of Sciences UkrSSR) are planned for improved mechanized evaluation of photographic observations, appropriate methods, and devices. The working program of the Soviet Astrometric Expedition to the southern

Card 2/3

Problems of astrometry ...

S/030/61/000/003/009/013
B105/B215

hemisphere has been approved by the conference. Furthermore, a plan of orientation was adopted for USSR observatories for the determination of the coordinates of various stars. A.A. Yakovkin, A.A. Goryn', and K.S. Shakirov reported on the determination of the parameters of the libration of the moon. The number of stations for the photographic determination of the coordinates of the moon and the exploration of her shape is planned to be expanded. With the launching of artificial earth satellites, a new branch of astronomy developed, namely, the astronomy of high-speed celestial bodies (B.A. Firago). On decision of the plenary meeting of the Astronomicheskiy sovet Akademii nauk SSR (Astronomical Council of the Academy of Sciences USSR) a commission with three sub-committees (width, time and frequency, geophysical interpretation) for the rotation of the earth was established. The new establishment of the Astrometric Commission and its sub-committees for photographic astrometry and the exploration of the motion of the moon and her shape was also confirmed. On the suggestion of A.A. Nefed'yev, Director of the Astronomiceskaya observatoriya im. V.P. Engel'gardta (Astronomical Observatory imeni V.P. Engel'gardt), the 16th Conference is planned to be held in Kazan' in 1962.

Card 3/3

BAGIL'DINSKIY, B.K.; KOSIN, G.S.; MEDVEDEVA, L.I.

Investigating the flexure of the Struve-Ertel' vertical circle
at Pulkovo. Izv. GAO 23 no.4:69-75 '64. (MIRA 17:9)

14(5)

HUN/4-60-7-3/25

AUTHOR: Bagin, Albin, Engineer

TITLE: A New Oil Refinery in Slovakia. The Complex Processing
of Petroleum //

PERIODICAL: Tudomány és Technika, 1960, Nr 7, pp 198-199

ABSTRACT: The article describes a new petroleum refinery under construction at Vlčie hrdlo, near Bratislava. Only a section of the refinery is in operation at present. The plant, apart from conventional oil products, will produce various organic chemicals, i.e. polyethylene, ¹ polypropylene, phenol, acetone, ethylene oxide, etc. The Soviet petroleum, which is processed at the refinery, will be transported by a pipeline, as from 1962. Some details are given on the standard technology of the sections for producing a) lubricating oils, b) fuels, c) organic chemicals and for processing gases. The desalinizing of petroleum in the 15,000-v electrostatic desalinizers and the desulfur-

Card 1/2

HUN/4-60-7-3/25

A New Oil Refinery in Slovakia. The Complex Processing of Petroleum

ization by hydrogenation are mentioned. Some of the products are listed and their use described. The distilling tower, the paraffin section and the cracking plant are in operation, while the whole plant, with the exception of the organic chemicals section, will be in operation by the end of the third five-year plan. There are 5 photos.

Card 2/2

BAGIN, B.P., inzh.; BABENKOV, I.S., inzh.

Recording the motion path of excavator buckets. Stroi. i dor.
mashinostr. 4 no.6:7-8 Je '59. (MIRA 12:8)
(Excavating machinery)

BAGIN, B.P., assistant

Calculating dynamic loads in the thrust mechanism of a quarry
excavator. Sobr. trud. MISI no. 31:146-161 '60.. (MIRA 14:3)
(Excavating machinery)

KAFUSTA, Frantisek; BAGIN, Kamil, inz.

Problem of determining the protein content of milk. Prum
potravin 14 no.8:437-438 Ag '63.

1. Vyskumný ustav mlékárenský Praha, pobočka Zilina.

BAGIN, Kamil, ins. (Zilina)

Problems of cooling and freezing poultry meat. From potravin
L.S no. 61385-368 Ag '64.

BAGIN, Karoly [deceased]

Study in nitrating acids. Veszprem vegyip egy kozl 4 no.4:
291-292 '60

1. Veszpremmegyei Festekgyar, Fuzfogyartelep.

MIKHAJLOV, V.; YANKEVICH, V.; BAGIN, N.

Radio controlled tractors. MTO 3 no.11:34-38 N '61.

(MIRA 14:10)

1. Direktor predpriyatiya "Kraspromavtomatika" (for Mikhaylov).
(Tractors...Radio control)

BAGIN, P.I.; IUNIKHIN, L.L.; inzh.-aspirant

Automatic features of the water supply on farms in the Altai.
Zhivotnovodstvo 20 no.11:81-82 N '58. (MIRA 11:11)
(Water supply, Rural)

BAGIN, V.

Young experts. Prof.-tekhn. obr. 11 no.8:32 N '54. (MIRA 8:1)

1. Ispolnyayushchiy obyazannost' zaveduyushchego oblastnym
uchebno-metodicheskim kabinetom.
(Technical education)

BAGIN, V.

AUTHOR: Bagin, V., Senior Methodologist 27-58-6-32/35

TITLE: Seminars for Active Members of Students' Organizations
(Seminari uchenicheskogo aktiva)

PERIODICAL: Professional'no-Tekhnicheskoye Obrazovaniye, 1958, Nr 6,
page 3 of cover (USSR)

ABSTRACT: The Administration of Labor Reserves of the Perm oblast' organized seminar-conferences for the active members of all students' organizations. A total of 700 students took part. These conferences help the students improve the quality of the work of their organizations.

ASSOCIATION: Permskiy oblastnoy metodicheskiy kabinet (The Perm' Oblast' Methodological Office)

Card 1/1 1. Educational dynamics-USSR 2. Conferences-Student organizations

AUTHOR: Bagin, V., Senior Methodologist SOV/27-58-12-11/23

TITLE: The Successes of Young Builders (Uspekhi molodykh stroiteley)

PERIODICAL: Professional'no-tehnicheskoye obrazovaniye, 1958, Nr 12,
pp 16-17 (USSR)

ABSTRACT: The Stroitel'noye uchilishche Nr 7 (Building School Nr 7) in
Berezniki is the best educational institution of the Labor
Reserves in the Perm' Oblast'. Workshops are available for
training the following workers: plasterer-painters, metal
workers, tinsmith and wire workers, carpenters and joiners.
The author describes the equipment of the shops, the training
methods, the high quality of work, the overfulfillment of
the production plan, the attention paid to the students' in-
dependent work, the school's cultural work, etc. The school's
director is A.L. Rutman. There is 1 photo.

ASSOCIATION: Uchebno-metodicheskiy kabinet Permskogo oblastnogo upravleniya
trudovykh rezervov (Training-Methodological Workshop of the
Perm' Oblast' Administration of Labor Reserves).

Card 1/1

L 60337-65 EWT(1)/EPA(s)-2 Pt-7 IJP(c) GG
ACCESSION NR: AP5018308

UR/0057/65/035/007/1273/1279
538.566 34

AUTHOR: Bagin, V. A.; Kotov, V. I.

TITLE: Investigation of hybrid waves in a circular waveguide partly filled with
a dielectric 21

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 7, 1965, 1273-1279

TOPIC TAGS: dielectric layer waveguide, waveguide propagation, electromagnetic
wave, relativistic particle, electron lens

ABSTRACT: The authors discuss theoretically the propagation in a waveguide of
circular section partly filled with dielectric of "hybrid" waves of the type dis-
cussed for a septate waveguide by H.Hahn (Rev. Sci. Instr., 34, 1049, 1963).
Such waves are of technical interest in connection with the separation of high
energy charged particles and applications to ultrahighfrequency equipment. The
circular waveguide of radius b is assumed to be filled from the radius a (less
than b) to the wall with a linear dielectric, and those waves are discussed for
which the fields are proportional to $\exp i(f t - k z - n\theta)$, where t is the time
 r, θ, z are cylindrical coordinates, n is an integer, and f a k are constants.

Card 1/2

L 60187-65
ACCESSION NR: AP5018308

These waves are found to be a mixture of the hybrid HE and HM modes (H.Hahn, loc. cit.), and the ratio of the two modes is calculated as a function of the waveguide parameters. The dispersion equation is derived and its solution is discussed in some detail for those waves whose phase velocity is the velocity of light. The dependence of the frequency and group velocity of these waves on the waveguide parameters is calculated and presented graphically, and an expression is derived for the energy flux. The focusing action of these waves on ultra-relativistic charged particles is discussed briefly; this action is similar to that of a ℓ^2 -pole lens. Orig. art. has: 10 formulas and 3 figures.

ASSOCIATION: none

SUBMITTED: 08Oct84

ENCL: 00

SUB CODE: EM

NR REF Sov: 005

OTHER: 004

BAGIN, V.I.

Hematite as a magnetically stable component. Izv. AN SSSR. Ser.
geofiz. no.9:1988-1993 S '61. (MIRA 14:9)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Hematite--Magnetic properties)

BAGIN, V.I.

Possibility of creating an alternating field method for determining the ferromagnetic composition of rocks. Izv. AN SSSR. Ser. geofiz. no.11:1622-1629 N '62. (MIRA 15:11)

1. Institut fiziki Zemli AN SSSR.
(Rocks—Magnetic properties)
(Ferromagnetism)

BAGIN, V.I.

All-Union Conference on the Earth's Constant Magnetic
Field and Paleomagnetism, held in Moscow. Vest. AN SSSR 34
no.5:141-142 My '64.
(MIRA 17:6)

BAGIN, V.M.

(Moskva)

Hollow vortex in a channel. Izv. AN SSSR Mekh. i mashinostr.
No. 4:129-132 '64
(MIRA 17:8)

BAGIN, V.M. (Moskva)

Motion of two localized vortexes with an equal circulation in the
vicinity of a flat wall. Izv.AN SSSR.Mekh. i mashinostr. no.5:
162-165 S-0 '63. (MIRA 16:12)

BAGIN, V.M. (Moskva)

Separation of a vortex from cylinder surface and the
trajectories of its motion. Izv. AN SSSR. Mekh. i mashinostr.
no.6:105-107 N-D '63. (MIRA 17:1)

S/040/62/026/005/006/016
D234/D308

AUTHOR:
TITLE:

Bagin, V. M. (Moscow)

Theory of stationary progressive waves on the surface
of a liquid of infinite depth.

PERIODICAL: Prikladnaya matematika i mehanika, v. 26, no. 5,
1962, 848-853

TEXT: The author takes a system of coordinates x_0y fixed with respect to the profile of the wave. The wave domain w is represented on a unit circle of the complex velocity potential u with the aid of

$$w = \frac{\lambda c}{2\pi i} \ln u$$

(1.2)

$$\zeta = \tau + i\theta = \ln \frac{c}{\bar{u}}$$

(2.1)

A function

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D234/D308

Theory of stationary ...

is introduced, c being the velocity of propagation of the wave.
Another function

$$\chi = \xi + i\eta = \frac{au}{1-\mu au} \quad (2.7)$$

is introduced, a and μ being certain positive real constants. The boundary conditions for the wave are reduced to

$$\text{Im} \left[-\frac{2\pi c^2}{\lambda g} (\chi + \mu \chi^2) \frac{dS}{d\chi} + S + \frac{3}{2} S^2 + \frac{1}{6} S^3 + \frac{1}{8} S^4 + \frac{1}{120} S^5 + F(\chi) \right] = 0 \quad (3.2)$$

in the χ plane, $F(\chi)$ being a power series. It is found that the real part of the expression in brackets must also be equal to 0. The function S is then represented as a series

Card 2/4

Theory of stationary ...

Then

S/040/62/026/005/006/016
D234/D308

$$z = \frac{\lambda}{2\pi i} \left[\ln u + b_1 u + \frac{1}{2} b_2 u^2 + \frac{1}{3} b_3 u^3 + \frac{1}{4} b_4 u^4 + \frac{1}{5} b_5 u^5 \right] \quad (5.4)$$

from which one can determine the equation of the wave profile. Formulas are derived for the momentum, kinetic and potential energy of one wave period, volume of liquid transported by a wave period and the static liquid level. It is stated that the convergence of (3.4) could not be proved.

SUBMITTED: June 18, 1962

Card 4/4

ACCESSION NR: AP4043895

S/0179/64/000/004/0129/0132

AUTHOR: Bagin, V. M. (Moscow)

TITLE: A hollow vortex in a channel

SOURCE: AN SSSR. Izvestiya. Mekhanika i mashinostroyeniye, no. 4, 1964, 129-132

TOPIC TAGS: vortex flow, hollow vortex, hollow vortex flow, cavitation, hydrodynamics

ABSTRACT: R. N. Cox, W. A. Clayden and Michell have already published papers on a hollow vortex at a flat wall and a hollow vortex situated symmetrically in a channel. The present article therefore considers a hollow vortex situated asymmetrically in a channel. Fig. 1 in the Enclosure shows a plane with the considered field simply connected. Figs. 2 and 3 show the fields of the complex speed potential w and the function of $Z = \ln v_0/\bar{v}$ (v_0 is the speed at point E). The considered fields of w and Z are shown on the upper half-plane of the characteristic variable t in Fig. 4 of the Enclosure by using the Schwartz-Kristoffel formula:

$$w = A_1 \int_{\infty}^t \frac{(t^2 - b^2) dt}{(c^2 - t^2) \sqrt{(t^2 - 1)(t^2 - a^2)}} + w(\infty) \quad (1)$$

$$Z = A_2 \int_{\infty}^t \frac{dt}{(t^2 - b^2) \sqrt{t^2 - 1}} \quad (2)$$

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ACCESSION NR: AP4043895

By integration and substitution

$$s = B_1 \left[\frac{(1 - \lambda^2) \sqrt{n}}{2 \sqrt{k^2 - n}} \ln \frac{\sqrt{k^2 - n} + \sqrt{n(k^2 t^2 - 1)}}{\sqrt{k^2 - n} - \sqrt{n(k^2 t^2 - 1)}} + \right. \\ \left. + n(1 + \lambda^2) \int_n^t \sqrt{\frac{t^2 - 1}{k^2 t^2 - 1}} \frac{dt}{1 - nt^2} + \right. \\ \left. + \frac{n}{2} (1 - \lambda^2) \int_n^t \frac{dt}{(1 - nt^2) \sqrt{(t^2 - 1)(k^2 t^2 - 1)}} \right] \quad (3) \quad \left(n = \frac{1}{k} \right)$$

When $0 \leq t \leq 1$:

$$s = B_1 \left[\frac{(1 - \lambda^2) \sqrt{n}}{2 \sqrt{k^2 - n}} \ln \frac{\sqrt{k^2 - n} + i \sqrt{n(1 - k^2 t^2)}}{\sqrt{k^2 - n} - i \sqrt{n(1 - k^2 t^2)}} + \right. \\ \left. + n(1 + \lambda^2) \int_n^1 \sqrt{\frac{1 - t^2}{1 - k^2 t^2}} \frac{dt}{1 - nt^2} - \right. \\ \left. - \frac{n}{2} (1 + \lambda^2) \int_n^1 \frac{dt}{(1 - nt^2) \sqrt{(1 - t^2)(1 - k^2 t^2)}} + iC_1 \right] \quad (4)$$

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ACCESSION NR: AP4043895

For a hollow vortex at a flat wall $n=0$. And for finding Z it is assumed that in $B_1 = B_0 k^2 / n$
and $n \rightarrow 0$, then:

$$z = B_0 \left[t(1 - \lambda^2) \sqrt{1 - k^2 t^2} + k^2 (1 + \lambda^2) \int \frac{\sqrt{1 - t^2}}{\sqrt{1 - k^2 t^2}} dt \right] \quad (5)$$

$$= \frac{k^2}{2} (1 - \lambda^2) \int \frac{dt}{\sqrt{(1 - t^2)(1 - k^2 t^2)}} + iC_0$$

It is then considered that when the hollow section decreases to zero as a limit, a point vortex is reached. Finally, as a result of transformations, the hollow section changes to a circle at the limit and formula (4) changes into:

$$x = B_0 \sqrt{1 - t^2}, \quad y = B_0 (t_0 - t^2) + C_0, \quad (C_0 = \text{const}) \quad (6)$$

These formulas are formulas of circles with centers at points $x_0 = 0$ and $y_0 = C_3$.
Orig. art. has: 4 figures and 29 equations.

Cord 3/8

ACCESSION NR: AP4043895

ASSOCIATION: none

SUBMITTED: 10Oct63

ENCL: Q4

SUB CODE: ME

NO REF SOV: 000

OTHER: 002

Card 4/8

ACCESSION NR: AP4043895

ENCLOSURE: 01

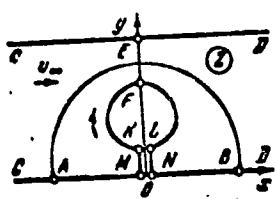


Figure 1.

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ACCESSION NR: AP4043895

ENSLOSURE: 02

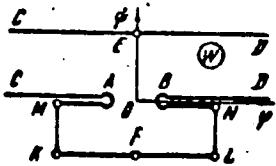


Figure 2.

Card 6/8

"APPROVED FOR RELEASE: 06/06/2000

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ACCESSION NR: AP4043895

ENCLOSURE: 03

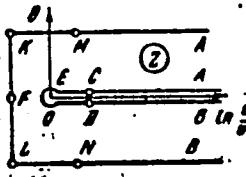


Figure 3.

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APPROVED FOR RELEASE: 06/06/2000

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ACCESSION NR: AR4043895

ENCLOSURE: 04

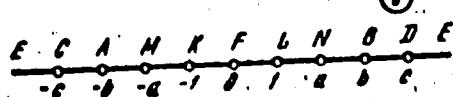


Figure 4.

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BAGIN, V.M. (Moskva)

Some problems in the flow of a heavy noncompressible fluid.
Izv. AN SSSR. Mekh. no.6:132-137 N-D '65. (MIRA 18:12)

L 9114-66 EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(1)

ACC NR: AP5026940

SOURCE CODE: UR/0373/65/000/005/0159/0163

AUTHOR: Bagin, V. M. (Moscow)

ORG: none

50
B

TITLE: On the motion of point vortices around a fluid stream flowing past an elliptical cylinder

SOURCE: AN SSSR. Izvestiya. Mekhanika, no. 5, 1965, 159-163

TOPIC TAGS: fluid mechanics, vortex, vortex trajectory, ^{1,55} flow around cylinder, flow characteristics

ABSTRACT: The problem of determining the trajectory of one or two symmetrically distributed point vortices relative to a fluid stream flowing past an elliptical cylinder is studied. A method is given for finding the first integral of a system of differential equations of motion for an arbitrary number of vortices. The problem is stated originally in terms of elliptical coordinates. Expressions are introduced defining the complex velocity potential as a function of vortex circulation and circulation along an infinite contour, the stream function, and the components of velocity of the k^{th} vortex in Cartesian coordinates and elliptical coordinates. The system of differential equations for vortex motion is written and transformed to canonical form. The case of a single vortex is considered first, and the single

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vortex velocity components are written and reduced to a computational form by means of simplifying assumptions. The single vortex trajectories are plotted for representative cases of elliptical cylinders. The general differential function applies also for the trajectory of two vortices if the fluid motion is symmetrical with respect to one axis of the cylinder. The trajectory equations are derived and plotted; additional equations are given for use in finding the vortex centers. The application of the vortex center formulas allows the plotting of the line of centers connecting several vortices. Orig. art. has: 3 figures and 33 equations.

SUB CODE: 20/ SUBM DATE: 12Jan64/ ORIG REF: 001/ OTH REF: 001

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(N) EWT(1)/EWP(m)/EWA(d)/ETC(m)/EWA(1) WW

ACC NR: AP6002330

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43
B

AUTHOR: Bagin, V. M. (Moscow)

ORG: none

TITLE: On some problems of motion of a heavy incompressible liquid

SOURCE: AN SSSR. Izvestiya. Mekhanika, no. 6, 1965, 132-137

TOPIC TAGS: incompressible flow, analytic function, conformal mapping, complex function, ideal fluid

ABSTRACT: The solution of a class of liquid flow problems is considered in two dimensions under ideal and incompressible flow conditions. The analysis is limited to analytic solutions in the complex plane. Problem one is sketched on Fig. 1,

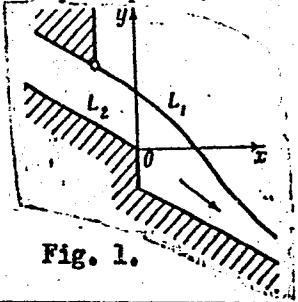


Fig. 1.

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whose free surface is approximated by

$$\text{Im} \left(-iv \frac{dc}{dw} + le^{2w} \right) = 0 \quad \text{on } L_1$$

An analytic function $\bar{\Phi}$ is then defined such that

$$\Phi = -iv \frac{dc}{dw} + le^{2w}$$

and on the surface L_2 $\text{Re } \bar{\Phi} = 0$. The singularities of this function are then calculated in the w -plane and transformed back into the z -plane. Problem two considers the incompressible flow over a 120° wedge where the stream function ψ has the value zero on the wedge surface and ψ_0 on the liquid surface. Introducing the same analytic function $\bar{\Phi}$, the liquid depth at the wedge apex is calculated to yield

$$H = \frac{4\psi_0}{\pi c} \int_0^{\eta_0} \left\{ \operatorname{ctg} \xi \left[\chi_0 + \frac{12\psi_0}{\pi v} \ln(\sqrt{2} \cos \xi) \right] \right\}^{-1/2} d\xi.$$

Depending on whether χ_0 is positive, zero, or negative, the flow is shown to be subcritical, critical or supercritical. The analysis is then extended to the case of a 120° wedge with symmetric flow having a system of progressive, finite amplitude waves on its surface. A similar analysis in the complex plane leads to the following asymptotic expression for the wave amplitude and phase angle

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ACC NR: AP6002330

$$A = \sqrt{\left(a Ei(a) - e^a\right)^2 + \pi^2 a^2}, \quad a = \operatorname{arc tg} \frac{\pi a}{a Ei(a) - e^a}$$

Orig. art. has: 58 equations and 7 figures.

SUB CODE: 20/ SUBM DATE: 230ct64/ ORIG REF: 001/ OTH REF: 001

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Fw

KUTSIN, E.A.; GUTMAN, I.M., inzhener, retsentent; BAGIN, Yu.I., inzhener,
redaktor; DUGINA, N.A., tekhnicheskiy redaktor.

[Handling fuel apparatus in diesel tractors] Ukhod za toplivnoi appa-
ratusoi dizel'nykh traktorov. Moskva, Gos.nauchno-tekhn.izd-vo ma-
shinostroit.lit-ry, 1954. 86 p.
(MIRA 8:4)
(Diesel engines)

ANDRYUSHCHENKO, Yu.S., BAGIN, Yu.I., BASHKIRTSEV, A.A., BELEN'KOV, G.Ye.,
BELINICHER, I.Sh., BUSHUYEV, N.M., VAGANOV, A.K., GASHEV, A.M.,
YES'KOV, K.A., ZGIRSKIY, Ch.I., IGNAT'YEV, M.I., KORUSHKIN, Ye.N.
KUZ'MOV, N.T., PATSKEVICH, I.P., PICHAK, F.I., RAYTSES, V.B..
RUDAKOV, A.S., SAPRYKIN, V.M., SIDOROV, F.F., UMINSKIY, Ye.A.
KHANZHIN, P.K., CHEREMOVSKIY, Yu.I., BUSHUYEV, N.M., kand.tekhn.
nauk, red.; DUGINA, N.A., tekhn.red.

[Manual for agricultural machinery operators] Pt. 3. Stationary
internal combustion engines, steam engines and windmills. Rural
electrification. Mechanization of production in animal husbandry.
Spravochnik mekhanizatora sel'skogo khoziaistva. Pt. 3. Statsionarnye
dvigateli vnutrennego sgoraniia, lokomobili i vetrodvigateli.
Elektrifikatsiya sel'skogo khoziaistva. Mekhanizatsiya proizvodstvennykh
protsessov v zhivotnovodstve. Pod red. N.M. Bushueva. Moskva,
Gos.nauchno-tekhn. izd-vo mashinostroit. lit-ry. 1957. 200 p.
(MIRA 11:9)

(Agricultural machinery)

ANDRYUSHCHENKO, Yu.S.; BAGIN, Yu.I.; BASHKIRTSEV, A.A.; BELEN'KOV, G.Ye.;
BELINICHEV, I.Sh.; BUSHUYEV, N.M.; VAGANOV, A.K.; GASHEV, A.M.;
YES'KOV, K.A.; ZGIRSKIY, Ch.I.; IGANT'YEV, M.I.; KORUSHKIN, Ye.N.;
KUZ'MOV, N.T.; PATSKEVICH, I.R.; PICHAK, F.I.; PAYTSER, V.B.;
HUDAKOV, A.S.; SAPRYKIN, V.M.; SIDOROV, F.F.; UMINSKIY, Ye.A.;
KHANZHIN, P.K.; CHUMICOVSKIY, Yu.I.; YERAKHTIN, D.D., kand. tekhn.
nauk, retsenzent; MAKAROV, M.P., inzh., retsenzent; TORBYLEV, Z.S.,
kand. tekhn. nauk, retsenzent; POLKANOV, I.P., kand. tekhn. nauk,
retsenzent; IGNAT'YEV, M.G., agronom, retsenzent; GUTMAN, I.M.,
inzh., retsenzent; YERMAKOV, N.P., tekhn. red.; SARAPANNIKOVA, G.A.,
tekhn. red.

[Reference manual for the agricultural machine operator] Spravochnik
mekhanizatora sel'skogo khoziaistva. Pt.2. [Repair of tractors and
agricultural machinery] Rement traktorov i sel'skokhoziaistvennykh
mashin. Pod red. N.M. Bushueva. Moskva, Gos. nauchno-tekhn. izd-
vo mashinostroit. lit-xy. 1957. 335 p. (MIRA 11:9)
(Agricultural machinery--Maintenance and repair)

BAGIN V.G.

ANDRYUSHCHENKO, Yu.S.; BAGIN, Yu.I.; BASHKIRTSEV, A.A.; BELEN'KOV, G.Ye.;
BELINICHER, I.Sh.; BUSHUEVA, N.M.; VAGANOV, A.K.; GASHEV, A.M.;
YES'KOV, K.A.; ZGIRSKIY, Ch.I.; IGNAT'YEV, M.I.; KORUSHKIN, Ye.N.;
KUZ'MOV, N.T.; PATSKOVICH, I.R.; PICHAK, F.I.; RAYTSES, V.B.;
RUDAKOV, A.S.; SAPRYKIN, V.M., SIDOROV, F.F.; UMINSKIY, Ye.A.;
KHANZHIN, P.K.; CHIKHOVSKIY, Yu.I.; YERAKHTIN, D.D., kand.tekhn.nauk;
retsenzent; MAKAROV, M.P., inzh.,retsenzent; TORBEYEV, Z.S., kand.
tekhn.nauk, retsenzent; POLKANOV, I.P., kand.tekhn.nauk, retsenzent;
IGNAT'YEV, M.G., agronom, retsenzent; GUTMAN, I.M., inzhener, retsenzent;
SARAFANNIKOVA, G.A., tekhn.red.; YERMAKOV, N.P., tekhn.red.

[Manual for agricultural mechanizers] Spravochnik mekhanizatora
sel'skogo khoziaistva. Moskva, Gos.nzuchno-tekhn.izd-vo mashinostroit.
lit-ry. Pt.1. [Tractors and automobiles, agricultural machinery and
implements, and operation of machine and tractor yards] Traktory i
avtomobili, sel'skokhoziaistvennye mashiny i orudia, ekspluatatsiya
mashinno-traktornogo parka. Pod. red.N.M.Bushueva. 1957. 462 p.
(MIRA 10:12)

(Machine-tractor stations)

BAGIN, Yu. I., inzh.

Investigating the use of hydraulic motors for the hydrostatic transmission of wheeled tractors. Trakt. i sel'khozmash. 30 no. 12:12-15 D '60. (MIRA 13:12)
(Tractors--Hydraulic equipment)

PICHAK, Fedor Ivanovich, kand.tekhn.nauk; ALEKSEYEV, Georgiy Petrovich,
inzh. Prinimal uchastiye BAGIN, Yu.I., inzh. ANOKHIN, V.I.,
kand.tekhn.nauk, retsenzent; ZELEMNEV, A.A., kand.tekhn.nauk,
retsenzent; SOROKIN, Ye.M., inzh., retsenzent; MOROZOV, A.G.,
kand.tekhn.nauk, red.; DUGINA, N.A., tekhn.red.

[Adjustment of tractors and agricultural machinery] Regulirovka
traktorov i sel'skokhoziaistvennykh mashin. Moskva, Mashgiz,
416 p. (MIRA 15:5)

(Tractors—Maintenance and repair)
(Agricultural machinery—Maintenance and repair)

SUSLOV, Nikolay Ivanovich, inzh.; GROGPR'YEV, A; elseu Dmitriyevich,
kand. tekhn.nauk; PIMENOV, Igor' Veniaminovich, inzh.;
SUSOROVA, Valentina Ivanovna, inzh.; KRESTNIKOV, Yevgeniy
Pavlovich, inzh.; MOROTSKAYA, Valentina Ivanovna, inzh.;
BASARGINA, Tamara Vasil'yevna, inzh.; ZAYTSEV, Pavel
Alekseyevich, inzh.; PODOL'SKIY, A.V., inzh., retsenzent;
LESIK, A.I., inzh., retsenzent; BASARGINA, T.B., inzh.,
retsenzent; BAGIN, Yu.I., inzh., retsenzent; DUGINA, N.A., red.

[Nonmetallic materials] Nemetallicheskie materialy; spravochnik.
Pod red. N.I.Suslova. Moskva, Mashgiz, 1962. 360 p.

(MIRA 16:3)

(Nonmetallic materials)

BAGIN, Yu.Ye., mekhanik-naladchik

Who should accompany the defectors? Put' i put.khoz. 7 no.12;
41 '63. (MIRA 16:12)

1. Stantsiya Slyudyanka, Vostochno-Sibirskoy dorogi.

BAGIN, Yu.Ye.,mekhanik-naladchik defektoskopov (st.Slytdyanka Vostochno-Sibirskoy dorogi)

Problems of defectoscopy. Put' i put. khoz. no.9:46 S '58.
(Railroad--Rails--Testing) (MIRA 11:9)

Document No. 1

AUTHORS: Potashnikov, M.M., Nagirnyak, F.I., Ostroukhov, S.N. and Bagina, L.I.

136-1-5/20

TITLE: Flotational Properties of Heavy Pyridine Bases (Flotatsionnye svoystva tyazhelykh piridinovykh osnovaniy)

PERIODICAL: Tsvetnye Metally, 1958, No.1, pp. 18 - 23 (USSR)

ABSTRACT: The authors give the results of their investigations on the influence of the different components of heavy pyridine bases on their flotational properties. Their claim that nothing on this subject has appeared in literature is commented on in an editorial note, drawing their attention to the reports of the Gintsvetmet organisation on its work in 1947-1952. The materials studied consisted of works' samples of heavy pyridine bases separated from the naphthalene and absorption fractions of coal tar and the authors tabulate their properties and the fractional composition and contents of different components; pronounced differences are evident. They go on to describe laboratory-scale experiments on the foam-producing properties of the bases in various stages of purification (Table 2), using 45 g of base per ton of the copper ore treated at the Sredneuralsk Works (Sredneural'skaya obogatitel'naya fabrika), the experiments being carried out in the works laboratory under the direction of A.L. Sagradyan. These showed that the most

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promising were the bases of the main naphthalene fraction purified by distillation and the removal of their light components (boiling away up to 200 °C) and of the main absorption fractions purified by distillation. Finally, the authors describe full-scale tests at the Sredneural'sk Works with heavy pyridine bases from the Nizhne-Tagil'sk By-product Coking Works (Nizhne-Tagil'skiy koksokhimicheskiy Zavod). The properties of the bases are tabulated (Table 3) and the flotation results are compared with those obtained using "Bellekshimprom" pine oil. Copper Staryy Sibay and copper-zinc Novyy Sibay ores were used and comparative tests with cresol were also carried out with the latter. It appears that pine oil and cresol can be replaced for the flotation of sulphide-copper and copper-zinc, respectively, by a cheaper foaming agent, distilled pyridine bases from the absorption fraction of coal tar. There are 5 tables, 1 Russian and 1 Polish reference.

ASSOCIATION: VUKhIN and Uralmekhanobr

AVAILABLE: Library of Congress
Card 2/2

POLAND/Chemical Technology. Chemical Products and Their Application. Elements. Oxides. Mineral Acids. Bases. Salts.

H

Abs Jour: Ref Zhur-Khim., No 10, 1959, 35457.

Author : Pawlikowski, S. and Baginska, J.
Inst :

Title : On the Decomposition of Ammonium Nitrate [sic] by Water Vapor.

Orig Pub: Przemysl Chem, 13, No 6, 338-341 (1957) (in Polish with English and Russian Summaries)

Abstract: The authors have investigated the properties of solid NH_4NO_2 (I) under different conditions of moisture and temperature and the possibility of preparing stable saturated aqueous solutions of I.

Card : 1/3

H-23

BLASIAK, Eugeniusz; BAGINSKA, Jadwiga

Studies on the kinetics of carbon oxide conversion. Chemia
stosow 6 no. 4:577-586 '62.

1. Katedra Technologii Wielkiego Przemyslu Nieorganicznego,
Politechnika, Gliwice.

BAGINSKA, Jadwiga; BLASIAK, Eugeniusz

Determination of carbide in calcium cyanamide. Chem anal
8 no. 4: 503-509 '63.

1. Politechnika Śląska, Gliwice.

USSR/Soil Science, Mineral Fertilizers.

J-3

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24744.

Author : Baginskas, B.

Inst :

Title : Phosphorus Fertilizers.

Orig Pub: Socialistinis zemes ukis, 1956, No 5, 13-15.

Abstract: No abstract.

Card : 1/1

ZARINSHAYA, A. S.

ZARINSHAYA, A. S.: "The differential protection of synchronous generators using current transformers with no partition by secondary circuit unit." In Higher Education USSR. Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov. Chair of Electric Stations and Substations. Tomsk, 1956. (Dissertation for the Degree of Candidate in Technical Sciences)

So: Knizhnaya letopis' No 38, 1956. Moscow

BAGINSKAYA, A.S., inzh.

Differential ground protection for generators. Izv.vys.ucheb.
zav.; energ. 2 no.4:8-16 Ap '59. (MIRA 12:9)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy
institut imeni S.M.Kirova. Predstavlena kafedroy elektricheskikh
stantsii, setey i sistem.
(Electric generators)